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ABSTRACT

This report summarizes presentations and discussions concerning student preparation for college and for the workplace. Three educational reform initiatives were addressed: reforming college preparation standards and admissions practices, establishing school-to-work and workforce readiness, and changing undergraduate curricula and standards. Topics discussed at the meeting included public policy initiatives, interdisciplinary approaches to curriculum development, collaborative efforts to enhance student motivation and workforce preparation, the use of technology to reduce postsecondary remediation and enhance student learning and cross-institutional programs aimed at improving teacher preparation, student transfer, and financial assistance for students. Forty states were represented by K-12 State Board members and administrators, higher education commissioners and regents, legislators, vocational educators and advisors, and representatives from business and educational organizations and foundations interested in reform efforts. The forum offered an opportunity to debate the realities and myths surrounding student preparation for college and work and to share successful models, effective change strategies, and innovative ideas to increase student achievement. A list of speakers and presenters is appended. (NAV)

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NATIONAL FORUM ON STUDENT PREPARATION FOR COLLEGE AND THE WORKPLACE

Summary of Presentations and Discussions

State Higher Education Executive Officers

and

Education Commission of the States

May 25-27, 1995
Denver, Colorado

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NATIONAL FORUM ON STUDENT PREPARATION FOR COLLEGE AND THE WORKPLACE

May 25-27, 1995, Denver, Colorado

Summary of Presentations and Discussions

Sponsored by:

State Higher Education Executive Officers

SHEEO

Education Commission of the States

ECS

The College Board

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September 1995

FOREWORD

The National Forum on Student Preparation for College and the Workplace was a true collaborative effort. The substantive agenda and the structure of the conference were based on the ideas and interests of several organizations and individuals.

For the State Higher Education Executive Officers (SHEEO), this effort would continue our work to bring together state K-12 and higher education leaders to discuss strategies to strengthen school-college collaboration. In particular, we wanted these leaders to address state policy strategies to improve the preparation of high school students for college, strengthen teacher preparation, improve the achievement of historically underrepresented students, and promote learning that will lead to the successful transition to the workplace.

The Education Commission of the States (ECS) saw in this National Forum an opportunity to connect several reform efforts in both K-12 and higher education, and to give these important connections additional attention at both the state and national levels. The developments highlighted at this Forum, involving political and educational leaders, are important steps in moving our education systems toward higher performance standards and more student-centeredness.

We would like to especially thank David Conley, Director of Oregon's Proficiency-Based Admission Standards Study (PASS), who provided invaluable suggestions about how this conference could support states that were working through student transition issues. David's reaction to our initial proposal helped us to broaden the agenda to address the needs of states at various stages of admission policy development.

The interests of the Forum's co-sponsors, The College Board and American College Testing, also helped to shape the agenda. In particular, Arthur Doyle from The College Board and Thomas Saterfiel from ACT offered helpful recommendations for structuring the conference to ensure a broad-based discussion around numerous issues, including student assessment, counseling, and the pre-college curricula.

This Forum could not have happened without financial resources. Support from The College Board, ACT and the Educational Testing Service (ETS) allowed teams of state education leaders to attend and participate in the conference. Special thanks to Donald Carstensen at ACT, John Childers, Leroy Fails and Walter Jacobs of The College Board, and Robert Albright and Herbert Flamer of ETS for their advocacy of this joint effort.

Additional financial support from the U.S. West Foundation, the Pew Charitable Trusts, and the Aetna Foundation helped us to develop resource materials for the conference and to continue this discussion with state education leaders around the country.

Esther M. Rodriguez
Associate Executive Director
SHEEO

Charles S. Lenth
Director of Higher Education Policy Studies
ECS

NATIONAL FORUM ON STUDENT PREPARATION FOR COLLEGE AND THE WORKPLACE

This report summarizes presentations and discussions at the National Forum on Student Preparation for College and the Workplace held in Denver, Colorado, on May 25–27, 1995. The Education Commission of the States (ECS) and the State Higher Education Executive Officers (SHEEO) were primary partners in planning and sponsoring the Forum; other cosponsors were The College Board, American College Testing (ACT) and the Educational Testing Service (ETS). Speakers and other Forum presenters represented state agencies and prominent national organizations.

The Forum focused on the convergence of several reform initiatives affecting education at all levels:

(1) **Reforming college preparation standards and admission practices.** States are in various stages of challenging students to reach higher levels of competency, including the movement to redefine high school graduation requirements, the use of student assessment and testing techniques and school restructuring efforts based on diverse models for student learning. K-12 reform has raised questions regarding state roles in defining minimum preparation standards for college. Some states are turning to the use of portfolios and proficiency-based admission criteria to augment or replace current practices in making higher education admission decisions. The Forum presentations outlined the status and effects of these efforts.

(2) **Establishing school-to-work and workforce readiness.** Many states have dropped the general education track and require all students to master needed skills by completing an academic core of courses and/or a challenging applied curriculum. This integrated approach requires far greater collaborative efforts both within and across institutions and with the larger community outside the classroom. The Forum highlighted innovative approaches to collaboration and the methods by which these approaches were established.

(3) **Changing undergraduate curricula and standards.** The convergence of performance criteria and workforce preparation initiatives makes it essential that higher education review many existing policies. For example, cross-institutional programs have lowered barriers for student access and required the development of innovative programs such as 4+2 or 2+2+2. These and other changes require greater flexibility and new types of standards in undergraduate education.

The Forum covered diverse topics that included public policy initiatives, interdisciplinary approaches to curriculum development, collaborative efforts to enhance student motivation and workforce preparation, the use of technology to reduce postsecondary remediation and enhance student learning and cross-institutional programs aimed at improving teacher preparation, student transfer and financial assistance for students. Specifically, the Forum was intended to:

- help states to recognize and develop state leadership in these areas by highlighting the importance of support from governors' offices, legislatures, business leaders, educators and community members;
- pave the way for developing new and needed coordinating roles at the state level; and
- demonstrate the multiple approaches and strategies used by various states, along with evidence about their success to date.

Forty states were represented among the Forum participants, including 35 state teams composed of K-12 state board members and administrators, higher education commissioners and regents, legislators, vocational educators and advisors, representatives from business and educational organizations and foundations interested in reform efforts.

RETHINKING TRADITIONAL EXPECTATIONS FOR STUDENT ACHIEVEMENT: A CHALLENGE TO THE STATES

Colorado **Governor Roy Romer** set the tone for the Forum in a keynote address that focused on cross-cutting themes from his viewpoint as policymaker, lifelong learner and parent.

Speaking as a policymaker, Romer expressed his concern over the lack of unifying and guiding values in education. "The world will be driven by major, radically different forces," he said, "and we need to rethink what we believe and how we think about learning."

"If we really believe all children can learn — and we should — we must act on it. This means high standards expected of everyone because the nation needs citizens who can think, reflect and be challenged," he said. Accomplishing this goal requires appropriate assessment linked back to learning, committed teachers who can make learning meaningful and educators who think and act across systems. Resources are important in making this happen, of course, but even more important are individuals willing to take the leadership initiative.

Romer stressed the need for relevant education tied to clearly defined purposes. In his own experience as a student pilot, he has seen the growth in his commitment to learning when he can apply what he has learned and see its consequences. "Content learning alone does not lead to mastery," he pointed out. "We need assessment and immediate response to know not only how well we are learning but also how well we are doing when we use our knowledge."

As a parent and community member, as well as political leader, Romer pleaded for higher education, in particular, to help the nation adjust to a rapidly changing world. He called for a new definition of quality: "How can parents and students tell where the best undergraduate education is to be found? In the past, value was measured by the educational qualifications of the faculty and the prestige-factor of tuition costs. But this is no longer sufficient in telling us what students gain from their learning." Quality must be defined by the value added to students, he maintained.

Governor Romer then issued several challenges for Forum participants. "Not only should educators challenge students effectively," he said, "but they must also reach within themselves for the will to make change happen." Governments can only do so much. Leadership for such extensive change must come from everywhere in the education system. The starting point must be the individual teacher and the classroom.

In keeping with the need for consultation and broad-based leadership, the Governor noted that current proposals for federal block grants to the states have generated a critical

need for advice and sound analysis. Support from the education community is essential.

"Unless the state response is well planned and includes the full participation of everyone involved with education, there is the potential for disaster," he said. State leaders must be able to count on help from educators, particularly in dealing with the challenge to convince community members of the need for change.

Romer's four-point agenda for change, outlined below, helped to set the tone for subsequent presentations and discussions during the Forum.

Governor Romer's Challenge to Educators:

(1) Develop a new vision of education that stresses high expectations for all students.

(2) Use assessment effectively to define quality and what we mean by "value added."

(3) Find ways to make learning meaningful to students by linking education to real life experience.

(4) Develop a shared core of values that can shape the education system of the future and give guidance to policymakers who must act upon it.

SETTING HIGHER EXPECTATIONS FOR K-12 EDUCATION . . .

During the Forum, participants made progress toward a consensus about how to think across boundaries to envision a preschool through college system. Such a structure would allow students to make educational transitions based on their accomplishments and needs rather than on institutional convenience. Key points of assessment would measure learning and provide reinforcement rather than serve as barriers. It would also be based on the firm conviction that, with the right challenge and support, all students *can* learn.

As the noted education researcher **Lauren Resnick** pointed out, "effort creates ability." Hard work should not be dismissed as a substitute for talent; instead, it should be seen as the main avenue by which excellence is attained.

As part of this vision, all students should take academic core courses and educators must avoid the either/or thinking that distinguishes between academic and career-preparation. Separate tracks would be eliminated and rigor built into both academic and applied courses. Skills and knowledge would be equally measurable and transferable in both, and it would be recognized that many of the same skills that prepare students for success in college also prepare them for the workplace. Also in place would be a clear definition of what students need to be able to do and against which standards they will be measured.

But developing these standards, establishing the ways in which students can demonstrate their competencies and gaining acceptance for these procedures in the educational and public communities are still "works in progress."

As Resnick, pointed out, more headway has been made on what standards *could be* than on what they are now: no state has yet created a statement of standards that can be used both for admission to college and for workplace preparation."Standards are not just statements of content," she said. "They have to say what students do to meet them." While there has been progress in such areas as content statements, performance descriptions, "good enough" criteria and portfolios, she said, education needs an evaluation system that responds to work and effort. By working hard, students create their own ability to do well.

Students will meet high expectations, Resnick continued, only if they know what the requirements are and if they believe that their efforts matter. Currently, only the 15% headed for the nation's elite colleges have that kind of reinforcement. But all students need performance criteria and credible evaluation by which they can measure their efforts.

> We need to understand that effort *creates* ability.
>
> *—Lauren Resnick, Director, Learning Research and Development Center, University of Pittsburgh, Pennsylvania*

National testing confirms the belief that students will respond when challenged. **Thomas Satterfiel** of ACT provided national test data showing a rise in the percentage of students taking academic core courses in high school (up from 45% in 1989 to 57% in 1993-94) with an accompanying, measurable gain in student accomplishment. Those who took the core curriculum scored nearly three points higher on ACT tests. This translated into greater success in college: 50% of those who took the core earned a baccalaureate degree in less than five years. Only 33% of those who entered without the core were able to do so.

Comparable successes have been reported in individual states that use a core of courses for college admission. In **Missouri**, college attrition has fallen from 42% to 30% among those taking the core. **Oklahoma** has seen a rise in ACT scores, minority enrollment in the core has increased and retention has been improved. Once the new requirements were instituted, **Utah** saw increases in ACT scores, decreases in the number of students on probation and increases in the number of students with GPAs over 3.5.

Important as student motivation is, however, it is not the only key to higher expectations. Faculty development, teaching methodology and curriculum content all play roles. As **Janice Weinman** of The College Board pointed out, while 24 states have set minimum course requirements for college admission, there is no guarantee of the excellence and rigor of these courses. Education systems interested in challenging students, she proposed, need to reinvigorate all parts of the educational process.

As discussion progressed, it became clear that reform efforts require fundamental change. **Barbara Heffner** of the Illinois Board of Education and a former school principal spoke for many when she described needed changes as "top to bottom." Philosophy, values and actions need to be aligned, she said, and our actions have to match what we profess to believe. This means that everyone has to be involved. Educators also need to learn and grow if they want others to do the same.

It also became clear that states have been slow to change. Successful reforms have generally been made at the local level because of the commitment of individual institutions. To move reform forward more broadly will require state leadership, involving commitment from policymakers, community leaders, individual educators, business people and parents.

Similar conditions and a parallel need to refocus education on student expectations and performance characterize higher education. For example, colleges and universities have

used articulation agreements as a substitute for real collaboration. For the most part, these have been of doubtful value to students.

> Institutions . . . must . . . move away from "me" to a collective "we" in their thinking.
> — *Stanley Koplik, Chancellor, Higher Education Coordinating Council of Massachusetts*

Calling articulation agreements "a band-aid on an emerging problem," **James Ratcliff** of the National Center on Postsecondary Teaching, Learning and Assessment called for institutions to move beyond inputs such as the number of credits a student earns to outcomes and the analysis of what students can really do.

Concentrating on outcomes will remove such barriers as inconsistent acceptance of credits and additional requirements imposed by departments on entering students. Accomplishing this will require institutions to cooperate far more closely.

The point was made repeatedly that such a broad-based initiative cannot be imposed from above. Creating a more seamless K-college system requires reformulating faculty and administrative roles, reward systems and professional programs; reexamining the incentives by which general change is instituted and sustained; removing barriers to cooperation and collaboration between, among and outside institutions; and rebuilding the funding structures that reinforce current practice.

Realizing a student-centered system will require an ability to look beyond existing jurisdictions and redefine roles and missions. Nothing less than a sea change is needed in how we think about the education process.

> **Comment**: From what I have seen and heard at this Forum, it is clear to me that the challenge ahead is greater than I thought it was. Empowering students means empowering faculty and administrators also, all of which implies that we cannot afford to hold onto our traditional practices. Are we up to the challenge? — *Kamala Anandam, Dean of Educational Technologies, Director, Project Synergy, Miami-Dade Community College, Florida*

REFORMING COLLEGE PREPARATION STANDARDS AND ADMISSION PRACTICES . . .

Governor Romer's challenge for educators to delineate a new vision of quality based on "what a student can do" and "what a student has learned" underlines the importance of timely and credible assessment of student accomplishment during high school and in higher education.

A number of states are exploring college admission standards based on "alternate criteria." Some states, including **Florida** and **Oregon**, are developing statewide performance-based college admission standards. In both instances, state frameworks are in place to define proficiency-based standards at several different transition points.

As Oregon State **Representative Carolyn Oakley** recounted, starting in 1991, the Oregon legislature passed five key pieces of legislation that have begun comprehensive state-wide educational reform. Oregon's secondary schools must begin offering the Certificate of Initial Mastery in 1996 for students in the 10th grade and a Certificate of Advanced Mastery in 1997 for those in the 12th.

Other states are in more preliminary stages. In **Colorado**, the Next Step Project is a pilot that will allow high school graduates from two districts to be admitted to the University of Colorado at Denver or the University of Northern Colorado based on proficiency levels.

Promisingly, when **Wisconsin** conducted an experimental admission process first using traditional GPA and class standing and, second, performance criteria and national test scores, it was found that the performance criteria correlated more closely with the test scores than did the GPA. More research and evaluation will be conducted in Wisconsin as they implement a competency-based admission system parallel with the existing system based on GPA, course requirements and standardized test scores.

Creating a student-centered system requires incorporating appropriate measurement at the right times — early enough for intervention if needed and late enough for reliable demonstration of earned skills. It also means providing sufficient preparation, support and information for student success, no matter when or where a student decides to enter higher education.

States have found that good information, counseling and strong financial aid programs are as crucial in attracting and keeping students as is strong academic preparation in admitting them in the first place. In this spirit, **Indiana** has targeted students in grades 9 through 12 for direct mailings of counseling information. A toll-free telephone line has been established and information is available electronically.

Taking another approach, the **State University of New York** has designed a

college transition course to be offered in high school. And **Illinois** has created a high school feedback system. Illinois' ten universities provide high schools with both statewide data and specific data. Data analysis shows that ACT composite scores and completion of a strong core are the best predictors of college success.

Another key component of student success is the ease of transfer between institutions. According to **Joseph Creech** of the Southern Regional Education Board the key components of successful student transfer policies include the following:

(1) a clear definition of what college-level study is and who has responsibility for it,

(2) the assignment of responsibility for remedial work,

(3) agreement on the locus for work in the major field and elective areas,

(4) the strong involvement of faculty, and

(5) effective and timely communication, including not only which credits will transfer but — even more important — how many remain to be completed at the receiving institution.

Because the purpose of raising standards and instituting performance criteria is to empower students to succeed rather than deny them access to education, several states have studied the connection between performance standards and the higher education enrollment patterns of minority and disadvantaged groups. Results so far appear to show that higher expectations have not negatively affected these groups. In fact, there is evidence to show that their success has been enhanced.

The College Board experience with the *Pacesetter* and *Equity 2000* programs bears this out: studies show that when all students complete algebra by the ninth grade and geometry by the tenth, the gap in the college-going-rate of minority and disadvantaged students can be narrowed.

Similarly, **Washington**'s higher admission standards seem not to have negatively affected minority student access. From 1988 to 1994, overall demand for admission to baccalaureate campuses declined in the state, but total minority freshmen enrollment increased annually. It must be kept in mind, however, that financial assistance remains a problem. While remediation at baccalaureate campuses is down and GPA has risen, retention rates have not improved — perhaps because of financial pressures on students.

Since financial difficulties are often the cause of minority failure to persist, states have experimented with connecting financial incentives to achievement. **Georgia**, for example, initiated and later expanded a successful program called Project HOPE, which uses lottery proceeds to fund scholarships for high school graduates with a

B average. While not specifically targeted to minority students, the number of eligible recipients has increased by 10% since the scholarships began, and studies show that more students are taking the college prep core curriculum.

Reform efforts in college preparation and admission practices are still in the early stages, but evidence presented at the Forum suggests a positive effect on student access to and success in higher education. It is essential that changes in college admission policies and practices reflect the new standards and teaching methods applied at the secondary level. Eventually, the new college admission practices must also be connected across all institutions and states so that the movement of students at the postsecondary level is not inhibited.

Comment: This Forum provided participants with two extraordinary opportunities. First, we had numerous occasions to debate the realities and myths surrounding student preparation for college and work. And, second, we shared successful models, effective change strategies and innovative ideas to increase student achievement. What is now needed is time to reflect on our efforts, refine our approaches and honestly communicate our trials and tribulations with one another and our communities. — *Sheila Arredondo, Senior Associate, Pueblo Community Compact for Student Success, Colorado*

ESTABLISHING SCHOOL-TO-WORK AND WORKFORCE READINESS . . .

Using his own experience as a student pilot, Governor Romer illustrated the term "meaningful learning." "When my instructor tells me 'Fly this plane,' and I have to do it. That kind of learning is very purposeful because it has real consequences. It's also the kind of applied learning that students lack in the schools."

During the Forum, much of the discussion about applied learning paralleled Romer's observations on the power of meaningful learning. Preparation for the workforce was seen to provide the real-life immediacy for students who are not headed for the nation's elite universities. The nation's changing economic needs were seen as the basis for a challenging curriculum.

Acting on these assumptions, states are initiating significant curricular reforms and other changes. A number of states encourage students to develop broad career goals earlier than ever before. Some states start career exploration as early as kindergarten. Many require career plans no later than the tenth grade. These states have worked with the business community to align student competencies with marketplace needs. In the view of **Noel Ginsburg**, president of a container manufacturing company in Colorado,"career exploration is the key to engagement."

From an economic viewpoint, business's involvement in education is a natural offshoot of the nation's need to maintain global competitiveness. Businesses need employees who can read, communicate, work as team members and know something about business and the economy. Involving business is revolutionary from education's viewpoint because it means that business will have an increasing role as consultant concerning curriculum content and teaching methodology.

One example of alignment between business and education is the ACT-developed system, *Work Keys*. This system provides an example of this new integration of business and education. Work Keys provides a system for identifying

(1) local job profiles in terms of component tasks and the skill levels needed to perform them,

(2) student assessment that measures individual proficiencies and skills, and

(3) reports that share the results with individuals, employers and educators.

While national trends show reduced employer commitment to worker training, this system serves as a bridge from school to the workplace.

Overcoming existing disconnections in the educational system was a recurrent theme of the Forum. Gaps were seen to exist between high school and higher education, between education and business and industry and between education and the community. Many participants pointed out that only a new way of thinking could bring the parties together.

Dan Wiltrout of the Council of Chief State School Officers argued that school-to-work initiatives have broad potential to change the national understanding of "educational system." Other participants suggested that this "system" might be based on performance standards and workforce preparation from preschool to college.

Among Forum participants from higher education, this suggestion of across-the-board connection between education and work generated the most debate. Some were concerned that an impossible expectation may be placed on education: a guaranteed good job after graduation. But others pointed out that students who complete a baccalaureate degree without receiving career and interest guidance may never have the chance to work in their major field. They cited studies that show some 25% of baccalaureate graduates return to the community colleges to become employable.

Peter Cappelli of the National Center on Educational Quality of the Workforce added a further caution: he reported that his research does not support the assumption that there is a shortage of skills in the nation. He finds instead that what business is complaining about is difficulty in finding a qualified workforce willing to work for a globally competitive wage. Many jobs in the future will not require baccalaureate degrees, although earning a degree has some role in job satisfaction and advancement.

Both K-12 and higher education will be profoundly affected by the emerging applied curriculum that accompanies workforce preparation. Much K-12 curricular reform effort is aimed at providing students with equally rigorous and challenging content in both academic and applied coursework. As a result, postsecondary institutions can look forward to working with students who have earned all or part of their credentials in an applied curriculum. The number of students coming out of these programs will continue to grow.

Right now, according to **Dan Hull**, of the Center for Occupational Research and Development, some 1.5 million students are taking applied courses in physics, mathematics, biology and chemistry. They will be graduating soon, he pointed out, and will bring with them higher expectation for themselves and different expectations of higher education institutions. Among these challenges will be a different style of learning. Seventy-five percent of students are contextual learners, yet the education system teaches abstractly. They will require different stimulation: experiencing, exploring and cooperating.

Higher education can respond by recognizing these differing learning styles. For example, the **Daniels School of Business** at the University of Denver has turned to an applied and interdisciplinary curriculum.

Instead of earning credits in traditional disciplines such as accounting and marketing, Denver students now study specific business problems and *in the process* gain the knowledge and skills as they are needed. This means that what they learn is tied specifically to their career aspirations.

Part of what makes implementing workforce readiness and an applied curriculum so challenging, therefore, is that this will require substantial change to existing educational philosophy, teaching methodology and assessment.

Comment: We need to recognize that the vast majority of students are contextual learners. We need to adapt ourselves to ensure their success. Our old ways won't work anymore.
— *Debbie Boldt, Director of Counseling, Jefferson City High School*

CHANGES IN UNDERGRADUATE EDUCATION . . .

In some states, a major challenge to education reform has been finding ways to involve higher education. **Peter Ewell** of the National Center of Higher Education Management Systems (NCHEMS) and **Trudy Banta** of the University of Indiana gave several reasons for this. These include higher education's reluctance to perceive itself as a pathway to the workplace, as well as an ingrained resistance by some faculty to providing students with structure and direction. Despite the challenges, higher education's presence is essential, particularly in the process of setting performance standards for admission to college.

The absence of higher education is part of what **James Mingle** of the State Higher Education Executive Officers (SHEEO) called the historical disconnections that run throughout the educational system: between K-12 education and higher education, between education and the community, between education and policy leaders and between education and business. According to Mingle, there is even a disconnection between our ideas and action stemming from a failure to communicate, to inform and convince constituent groups, to face the costs of change and to formulate policies grounded in reality. "We are often the victims of our own complexity," he said, "seeking the silver bullet of single policy that covers everything. We have to be prepared to go at change with consistency and always ask how what we do will add value to the enterprise."

Evidence of this disconnection was presented in a session reporting on a 1994 survey conducted by **Carl Van Horn** for the New Jersey Business-Higher Education Forum. This study found that while only 20% of those surveyed believed that bachelor's degree holders were well prepared, even fewer (6%) could say the same about associate degree graduates. To turn this around, responding businesses showed willingness to become more involved in curriculum design efforts.

Several examples of successful collaboration among higher education, K-12 and business were highlighted. **California, Wisconsin** and **Texas** provide disparate yet effective models. A consortium of 10 regional universities and colleges in the southeastern section of Ohio shows how cooperative efforts can make a difference in the college-going rate of an impoverished community. But these examples tend to be exceptional.

Calvin Fazier, senior consultant at ECS, pointed out that higher education's separateness negatively affects teacher preparation programs. Departments and schools of education are among the lowest priorities on the nation's campuses. Yet, they have the potential for the most extensive effects on the national reform movement.

Teacher preparation programs must receive the highest level of attention since they have the potential to bring about large change in the greatest number of lives.

Frazier noted that the most successful reform states have adopted standards for K-12 and certify and license teachers after reviewing their level of knowledge in the subject they will teach. "Teacher education programs are essential components," he said, "and it is critical that prospective teachers be tested long before they experience practice teaching." Yet, because schools and colleges of education have been put to one side on campuses, the necessary partnership between the education and academic disciplines is often missing. A major step forward, he said, would be strengthening the incentives and rewards for the training of teachers.

> We need to address the disconnection among elementary, secondary and postsecondary institutions that results in 25% of four-year and 40% of two-year entering students requiring remediation. The state, in effect, pays twice for their education. — *Michael Nettles, Professor of Education and Public Policy, University of Michigan*

Change is clearly on the way. The **University of Arkansas at Monticello** has designed a new approach to teacher training. Prospective teachers must meet strengthened admissions requirements to enter the school of education; they must have an academic major; they are interviewed by a panel of public school teachers and college faculty before practice teaching for a year; and practice teachers are given total responsibility for the class during their last term. A one-year follow-up program supports the new teachers during their first year of teaching. The Master Teachers who supervise them are also adjunct faculty who earn professional credit for their involvement. The process is designed to produce qualified teachers who are well suited to teaching.

Vision and commitment are needed to make these changes. In a number of states, roles have been legislatively mandated. But in others, the process has begun with discussion centered around performance standards for high school students.

As **Archie Lapointe** of the Educational Testing Service pointed out, the primary needs in the change process are communication and leadership. Unlike other nations in which only a small percentage ever have the opportunity of higher education, the U.S. has made a commitment to access. "If this is to be maintained," he said, "the entire education community must agree on common goals and work together."

DEVELOPING A SHARED CORE OF VALUES THAT CAN SHAPE THE EDUCATION SYSTEM OF THE FUTURE AND GIVE GUIDANCE TO EDUCATORS . . .

The Forum's several themes came together in the concluding session through a call to build a set of core values that can serve as a base of understanding and a way for different parts of the system to talk with one another. Several important points emerged:

◆ The educational system must be built on trust and communication rather than competition and isolation. Discussion over performance competencies is one way consensus and collaboration can be built. *These discussions lay the groundwork for new coordinating structures at the state level, demanded by changing perceptions of what is meant by an "educational system."*

◆ Cooperation and collaboration apply both within and outside the educational system. Designing and instituting strengthened academic expectations and an applied curriculum are seen as meaningful ways to involve business and the community in the education process. *This underscores the importance of collaborative support from all parts of the community, including the governor's office, business, education and the community.*

◆ Career exploration and development involve and empower students in their learning. *Responding to individual student needs and aspirations requires that education be flexible and student-centered.*

◆ Students are expected to meet heightened expectations. A student-centered system celebrates achievement and motivation. Such a system expects that all students can learn. (One Forum participant, an elementary school principal, changed this to "every child will learn.") Educators are respectful of individual learning differences. *This broad goal is possible only through the empowerment of individuals and the establishment of broad-based leadership.*

State presentations during the Forum showed that innovative programs based on these values are already producing results, but all face the need to overcome log jams of traditional practice. In some states, reform efforts have required legislative leadership to bring business, K-12 and higher education to the table.

What was gained from the Forum was new insight into what an educational system based on these core values might look like. In such a system:

1. All students are required to complete an academically challenging core

curriculum. The general track of diluted courses has been discarded and Saturday workshops and summer academies are in place to help students meet heightened expectations.

2. All students begin career exploration no later than middle school and have identified a career-cluster by grade 10. Strong counseling programs and centers help K-12, postsecondary students and lifelong learners achieve their ambitions.

3. Student accomplishment is documented by portfolios or other records of performance. Academic and applied courses are interchangeable, thus accommodating different learning styles. The college preparatory curriculum allows students to complete some portion of their requirements through applied learning. As a result, remediation is down in higher education and retention and degree completion is up.

4. Valid and credible assessment systems are used regularly to provide students with immediate feedback on their performance. These systems also allow higher education to report back on student progress to individual schools.

5. Higher education has prepared a list of competencies needed for success in college, and faculty work collegially with K-12 teachers on identifying the best ways for students to meet these requirements.

6. Existing articulation agreements between institutions have given way to integrated educational programs such as 2+2+2 and 4+2, designed to reduce duplication and facilitate lifelong learning.

7. Business is directly involved in identifying needed workplace skills, working on curriculum design, providing employment experience for students and giving feedback to the schools on student performance.

8. Teacher education programs have high admission requirements and expectations, and require a disciplinary major. New teachers can teach in both traditional and applied classrooms, and strong professional development programs are in place for existing classroom teachers.

9. Faculty reward systems in higher education acknowledge different kinds of scholarship. Tenure and promotion decisions take increased account of teaching and service as faculty work with the K-12 system and business.

10. State funding mechanisms support cross-institutional programs, with a certain percentage of allocation increases set aside for institutions that work as part of consortia to meet student needs, and to support multi-level programs.

One of the greatest challenges to realizing such a system is the need for state leadership. According to Colorado **Senator Alvin**

Meiklejohn, there are three areas where this leadership is vital:

- To remove existing barriers between K-12 and higher education,
- To mesh K-12 content-standards, assessment and evaluation efforts with higher education, and
- To provide new forms of teacher education.

In each of these areas, all parties must communicate effectively. In Meiklejohn's experience, change is driven by people, but there comes a time when more is needed and public officials alone cannot sustain the impetus.

Reform efforts all too often represent local initiatives built upon the good will of individuals. **Jeffrey Baker** of the Montana System of Higher Education called on education leaders to take back the initiatives that, for a variety of reasons, have been abdicated to others. Without this leadership and the systemic reform it represents, meaningful collaboration and cooperation across and among institutions will be difficult.

As Barbara Heffner pointed out, developing a value system centered on students demands that educators rise to new challenges, but it is also the way to bring education closer to meeting what the community says it wants.

Comment: Higher education needs to give more thought to two subjects: (1) the standards needed by incoming college students to help them succeed in college and (2) the standards needed by graduating college students to help them succeed in the workplace, all the while looking outward to K-12 and employers for assistance as we do this.

— Virginia Breeze, Board of Regents, University of Alaska

NATIONAL FORUM ON STUDENT PREPARATION FOR COLLEGE AND THE WORKPLACE, MAY 25–27, 1995
LIST OF PRESENTERS AND SPEAKERS

Kamala Anandam, Associate Dean for Educational Technologies and Director, Project Synergy, Miami Dade Community College System, Florida

Mary Apodaca, Coordinator, Coalition of Essential Schools, Colorado Department of Education

Jeffrey Baker, Commissioner of Higher Education, Montana System of Higher Education

Trudy Banta, Vice Chancellor, Planning and Instructional Improvement, University of Indiana

Hans Brisch, Chancellor, Oklahoma State Regents for Higher Education

Peter Cappelli, Co-Director, National Center on Educational Quality of the Workforce, University of Pennsylvania

Donald J. Carstensen, Vice President, Educational Services Division, American College Testing, Iowa

Carlos R. Cisneros, Chair, Senate Education Committee, New Mexico

David T. Conley, Director, Proficiency-based Admissions Standards System (PASS), Oregon State System of Higher Education

Lynn Cornett, Vice President for State Services, Southern Regional Education Board, Georgia

Gary S. Cox, Executive Director, Kentucky Council on Higher Education

Joseph D. Creech, Associate Director for Educational Policies, Southern Regional Education Board, Georgia

Diana M. DeLuca, Consultant, Macintyre Communications Services, Colorado

Peggy Doss, Principal and Director, Development School, University of Arkansas at Monticello

Peter Ewell, Senior Associate, National Center for Higher Education Management Systems, Colorado

Comment: I'm very interested in how to meet the needs of students going into the workforce, particularly into jobs that require more than high school education but less than a bachelor's degree. I'm impressed by how many states are working on the utility of the degree, evaluating how well it is meeting student and workforce needs. — *Orville B. Carnaham, Legislator, Utah State House of Representatives*

Saul Fenster, President, New Jersey Institute of Technology

Rex Fortune, Superintendent, Center Unified School District, California

Calvin M. Frazier, Senior Consultant, Education Commission of the States

Scott Gillie, Executive Director, Indiana College Placement and Assessment Center

Noel Ginsburg, President, Container Industries, Inc., Denver, Colorado

Jerry Griffith, Assistant Vice Provost for Assessment, University of Northern Colorado

Larry Harris, Dean of Education, University of Arkansas at Monticello

Sarah Hawker, Assistant Director of Academic Affairs, Illinois Board of Higher Education

Brenda Heffner, Associate Superintendent, State Board of Education, Illinois

John B. Hiebert, Board Member, Kansas Board of Regents

Mary Henry, EQUITY 2000 Site Coordinator, Milwaukee Public Schools

Billy Hufford, Executive Director, Curriculum and Instruction, Mapleton School District, Colorado

Dan Hull, President, Center for Occupational Research and Development (CORD), Waco, Texas

Bruce Hutton, Professor of Marketing, University of Denver, Colorado

David Johnson, Program Officer, Fund for the Improvement of Postsecondary Education, District of Columbia

Vinetta C. Jones, Director, EQUITY 2000, The College Board, New York

Stephen M. Jordan, Executive Director, Kansas Board of Regents

Stanley Z. Koplik, Chancellor, Higher Education Coordinating Council, Massachusetts

Robert C. Korte, Director of the National Job Analysis Study, American College Testing, Iowa

Carolyn Kostelecky, Assistant Vice President, Southwest Region, American College Testing, Texas

Comment: This Forum has demonstrated how effective we can be when we all work together. The California team can now see how to strengthen our pilot admissions system by working with the independent efforts of others. — *Dennis Galligani, University of California*

John Lanning, Associate Dean, College of Liberal Arts and Sciences, University of Colorado at Denver

Archie LaPointe, Executive Director, Center for Assessment on Educational Progress, Educational Testing Service, New Jersey

Sue M. Legg, Associate Director, Office of Instructional Resources, University of Florida

Charles S. Lenth, Director, Higher Education Policy Studies, Education Commission of the States

Jeffrey Livingston, Associate Commissioner for Academic Affairs, Utah System of Higher Education

Charles Manning, Chancellor, University of West Virginia System

Deborah Aydt Marinelli, Student Affairs Associate, Division of School Affairs/Special Programs, State University of New York

Dewayne Matthews, Director, Student Exchange Program, Western Interstate Commission for Higher Education, Colorado

Russell McCampbell, Assistant Commissioner for Vocational and Adult Education, Missouri Department of Elementary and Secondary Education

The Honorable Alvin Meiklejohn, State Senator, Colorado

James R. Mingle, Executive Director, State Higher Education Executive Officers, Colorado

Bonnie Morgan, Director of Curriculum, Utah State Office of Education

Ed Murphy, President, PWS Publishing, International Thomson, Massachusetts

William Nelsen, President, Citizens' Scholarship Foundation of America, Inc., Minnesota

Michael T. Nettles, Professor of Education and Public Policy, University of Michigan

Frank Newman, President, Education Commission of the States

The Honorable Carolyn Oakley, Chair, Subcommittee on Ways and Means for Education, Oregon House of Representatives

Karen Rasmussen, Associate Commissioner for Planning and Policy Studies, Indiana Commission for Higher Education

James L. Ratcliff, Director, National Center on Postsecondary Teaching, Learning and Assessment, Pennsylvania State University

Comment: The value of a conference like this is the cross-fertilization between people in the various sectors responsible for education. There's a necessary relationship between standards and assessment. They form a critical link to achieving quality in any form. — *Stanley Z. Koplik, Chancellor, Coordinating Council of Massachusetts*

Wes Regian, Senior Researcher, Armstrong Laboratories, Brooks Airforce Base

Lauren B. Resnick, Director, Learning Research and Development Center, University of Pittsburgh, Pennsylvania

Esther M. Rodriguez, Associate Executive Director, State Higher Education Executive Officers, Colorado

The Honorable Roy Romer, Governor of Colorado and 1994-95 Chairman of the Education Commission of the States

Cynthia S. Ross, Executive Vice Chancellor for Academic Affairs, Oklahoma State Regents for Higher Education

Larry Rubin, System Academic Planner, The University of Wisconsin System

Thomas H. Satterfiel, Vice President, Research Division, American College Testing, Iowa

Cynthia Luna Scott, Project Manager, Higher Education, Education Commission of the States, Colorado

Doug Scrima, Senior Policy Associate, Washington Higher Education Coordinating Board

Jane C. Sherman, Deputy Director, Academic Affairs, Washington Higher Education Coordinating Board

Glenn Singleton, Executive Director, Pacific Educational Group, Palo Alto, California

Carolyn Smith-Kennedy, Director, Community College Projects, Maryland Higher Education Commission

Carol F. Stoel, Principal Partner, Education Trust, American Association for Higher Education, California

James E. Sulton, Jr., Senior Academic Affairs Officer, Colorado Commission on Higher Education

Fred Taylor, Chancellor, University of Arkansas at Monticello

John Thompson, Superintendent, Tulsa Public School System, Oklahoma

Carl Van Horn, Executive Officer, New Jersey Business-Higher Education Forum

Michael Vollmer, Director, Georgia HOPE Scholarship Program

David Walker, Assistant Vice Chancellor for Academic Affairs, Tennessee Board of Regents

Comment: I was impressed by the insight and understanding that many presenters brought to the challenges that face us. It was very reassuring to discover Governor Romer's interest in and ability to grapple with the challenges and with his attempt to find solutions. — *Bill Garner, Assistant Superintendent, Secondary Education/vocational Technical, Wood County Schools, Parkersburg, West Virginia*

Janice Weinman, Executive Vice President, Programs, The College Board, New York

Linda Barton White, Manager, Academic Programs Unit, California Postsecondary Education Commission

Wayne White, Director, Appalachian Center for Higher Education, Shawnee State University, Ohio

Dan Wiltrout, Project Director, Connecting School and Employment Project, Council of Chief State School Officers, District of Columbia

John Wittstruck, Associate Commissioner, Policy Analysis and Data Services, Missouri Coordinating Board for Higher Education

Comment: There has been a gulf between higher education and K-12 and we are here to help lessen it. The alignment is happening, but all parties have protected their turf. This conference demonstrates that progress is possible, and I hope the dialog will continue. — *I.B. "Sonny" Rundell, State Board of Education, Kansas*

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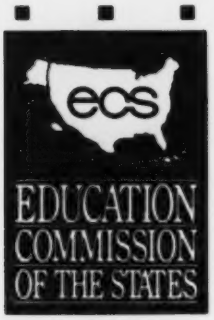

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